

Applicant: Pauli Koutonen
Application No.: 09/905,550
Art Unit: 3654

Claim Listing

- 01
1. (previously amended) A method for winding and slitting a paper web in a papermaking line, comprising the steps of:
dividing a web longitudinally into a plurality of slit webs of first selected widths;
winding the slit webs about roll centers, to form rolls at a winding station;
periodically cutting the web in a cross machine direction with a web-severing device
in conjunction with a roll set change on the winding station, wherein the
improvement comprising:
slitting the web with a first slitter assembly adjusted to the first selected widths, while
a second slitter assembly is adjusted into second selected slitting width
positions which are different than the first selected widths, followed by cutting
the web in the cross machine direction with the web-severing device, followed
by slitting the web with the second slitter assembly, while the first slitter
assembly is adjusted into alternative selected slitting width positions.
 2. (original) The method of claim 1, wherein in the first slitting assembly and the
second slitting assembly are disposed in succession along the travel direction of the web.
 3. (original) The method of claim 1 wherein, during the roll set change of the
winding operation, the first slitter assembly is driven into an open position in order to produce
a desired length of full-width web, after which the second slitter assembly is driven into a
slitting position in order to divide the web into slit webs.
 4. (original) The method of claim 3 wherein the periodic cutting of the web in
the cross machine direction is obliquely to the web travel direction at an area of the desired
length of full-width web.

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5. (currently amended) The method of claim 1 wherein, prior to the roll set change at a first winding station, the slit webs are wound into finished rolls and a second winding station is prepared for winding by inserting new roll centers in place and driving the winding station to a synchronous speed with the speed of the web.

6. (previously amended) The method of claim 1 wherein, the step of periodically cutting the web includes the operation of using the web-severing device to apply glue or similar adhesive to an area of the full-width length of the web, close to the severing point of the web, in order to attach a tail of the web to the roll centers at the winding station.

 7.

(cancelled)

~~7~~ 8. (currently amended) The method of claim 1 ~~7~~, wherein the web is passed from the papermaking machine to the winding station via a drawing nip formed by two rolls.

 9.

(cancelled)

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8/10. (previously amended) An apparatus in a papermaking line for slitting and winding a paper web comprising:

a paper web, defining a direction of travel, extending through a first adjustable slitter assembly set to produce a plurality of first slit webs of first selected widths, a second adjustable slitter assembly set to produce a plurality of second slit webs of second selected widths, which differ from the first selected widths, a web-severing device, and a first winder station having a first plurality of roll centers corresponding to the first slit webs of the first selected widths and a second winder station having a second plurality of roll centers corresponding to the second slit webs of the second selected widths, the first winder station and the second winder station being arranged to alternate so as to receive corresponding first slit webs of the first selected widths on the first plurality of roll centers in the first winder station and second slit webs of the second selected widths on the second plurality of roll centers in the second winder station, wherein the first adjustable slitter assembly and the second adjustable slitter assembly are arranged to alternate in cutting the web, and each of the first slitter assembly, and the second slitter assembly being adjustable, when not cutting the web, to vary the web slit widths.

11. (previously amended) The apparatus of claim 10⁸, wherein the first adjustable slitter assembly and the second adjustable slitter assembly are disposed in succession along the travel direction of the web.

12. (canceled)

9/10. (original) The apparatus of claim 10⁸, wherein said web-severing device is adapted to cut the web obliquely to the web travel direction.

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~~10~~⁸ 14. (previously amended) The apparatus of claim ~~10~~⁸, wherein said web-severing device includes means for applying glue or similar adhesive close to a severing point of the web in order to attach a tail of the web to the roll centers.

~~15~~ 15. (cancelled)

~~12~~⁸ 16. (currently amended) The apparatus of claim ~~10~~⁸ 15, further comprising a drawing nip for passing the web from the preceding papermaking apparatus to the first adjustable slitter assembly and the second adjustable slitter assembly, the drawing nip for keeping a proper tension of the running web at the web's delivery from said preceding processing step.

~~17~~ 17. (cancelled)

~~13~~ 18. (previously amended) A method for winding and slitting a paper web in a papermaking line, comprising the steps of:

alternately slitting a moving web, which defines a travel direction, with a first slitter assembly to divide the web longitudinally into a first plurality of slit webs of first selected widths, and winding said first plurality of slit webs onto a first plurality of winding cores of first selected widths, and simultaneously adjusting a second slitter assembly into a second selected slitting width position followed by;

cutting the web in the cross machine direction with a web-severing device in conjunction with a roll set change on a winding station which receives the web from the slitter assemblies, followed by slitting the web with the second slitter assembly and winding said second plurality of slit webs onto a second plurality of winding cores of second selected widths.

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14 19. (original) The method of claim ¹³18 wherein the first slitting assembly and the second slitting assembly are disposed in succession along the travel direction of the web.

15 20. (original) The method of claim ¹³18 wherein, during the roll set change of the winding operation, the first slitter assembly is driven into an open position in order to produce a desired length of full-width web, after which the second slitter assembly is driven into a slitting position in order to divide the web into slit webs.

16 21. (previously added) A method for winding and slitting a paper web in a papermaking line, comprising the steps of:

dividing a web longitudinally into a plurality of slit webs of first selected widths;
winding the slit webs about roll centers, to form rolls at a winding station;
periodically cutting the web in a cross machine direction with a web-severing device
in conjunction with a roll set change on the winding station, wherein the improvement comprises:

slitting the web with a first slitter assembly adjusted to the first selected widths, while a second slitter assembly is adjusted into second selected slitting width positions which are different than the first selected widths, followed by cutting the web in the cross machine direction with the web-severing device, followed by slitting the web with the second slitter assembly, while the first slitter assembly is adjusted into alternative selected slitting width positions; and
wherein, during the roll set change of the winding operation, the first slitter assembly is driven into an open position in order to produce a desired length of full-width web followed by the step of using the web-severing device to apply glue or similar adhesive to an area of the full-width web, after which the second slitter assembly is driven into a slitting position in order to divide the web into slit webs.